2.12 Hazardous Waste/Materials

2.12.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act (CWA)
- Clean Air Act (CAA)
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

2.12.2 Affected Environment

This section is based on the *Initial Site Assessment* (ISA) (Kleinfelder West, Inc., August 2010).

2.12.2.1 Physical Setting

Geology

The study area is located in southern Orange County along the western flank of the Peninsular Range Geomorphic Province of California. The Peninsular Ranges extend southeastward into Baja California, Mexico, and are characterized by northwest-trending valleys that are subparallel to subsidiary faults of the San Andreas Fault System (California Geological Survey [CGS], 2002a). The study area is located along San Juan Creek, which divides the San Joaquin Hills to the west from the foothills of the Santa Ana Mountains to the east, and along the coastal plain and bluffs bordering the Pacific Ocean.

The study area is underlain by surficial deposits consisting of artificial fill, alluvium (including uplifted older nonmarine and marine terraces, slope wash, and younger active channels within major drainages), landslide debris, and bedrock belonging to the Capistrano Formation. The uppermost layer of soil along much of the alignment generally consists of artificial fill comprised of sand, silt, silty fine sand, and gravelly sand that varies in thickness depending on location. The artificial fill was generated during several episodes of construction along the I-5, surrounding developments, utility installations, and roadways.

Hydrology

The study area is located within the San Juan Valley Groundwater Basin of the South Coast Hydrologic Region. The basin is bound on the west by the Pacific Ocean and otherwise by tertiary semipermeable marine deposits. San Juan Creek drains the San Juan Valley, and several other creeks drain valleys tributary to the San Juan. No settling ponds, lagoons, surface impoundments, wetlands, or catch basins (other than for routine storm water capture) were observed within the study area during the reconnaissance of the study area.

Along the northern portion of the study area, west of the I-5 between San Juan Creek Road on the north and Stonehill Drive on the south, groundwater was measured and estimated at 29.5 ft and 55 ft at 32841 Camino Capistrano and 33301 Camino Capistrano, respectively. Groundwater was reported to flow in a south–southwest direction at 32841 Camino Capistrano and to the west–northwest at 33301 Camino

Capistrano. Near the center of the study area, east of the I-5 at 606 Camino De Los Mares, groundwater was measured at depths ranging from 52 to 58 ft bgs, and groundwater was shown to flow to the south in 1993, and to the east–southeast in 2007. Near the southern end of the study area, groundwater was measured at depths ranging from 39 to 41 ft bgs at 530 Avenida Pico in 2007. Groundwater was not encountered in borings drilled to depths up to 68 ft bgs east of the freeway at 600 Avenida Pico. Groundwater flow was reported to flow generally toward the west/southwest. Fluctuations of the groundwater level, localized zones of perched water, and soil moisture content should be anticipated during and following the rainy season. Irrigation of landscaped areas on or immediately adjacent to the study area can also cause a fluctuation of local groundwater levels.

Surrounding Land Uses

Properties adjoining the study area consist of a mix of vacant land, residential, commercial, recreational, educational, and industrial properties. No structures are located within the study area, with the exception of structures located on potentially affected parcels at the I-5/Avenida Pico interchange.

2.12.2.2 Hazardous Materials Setting

The ISA was conducted to determine whether the study area could be impacted by hazardous waste. The ISA included a search of government records to obtain a listing of properties or known incidents from State or federal databases for hazardous waste sites and site reconnaissance to identify any potential for the existence of contamination within the study area.

Federal, State, and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous wastes, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Kleinfelder contracted with a commercial database service, EDR of Milford, Connecticut, to review the regulatory agency lists for references to the study area and listings within 0.25 mi of the study area.

The following database searches, research, and reconnaissance were conducted as part of the ISA:

- **Environmental Database Review:** Records searches of federal and State environmental databases for the study area (refer to Figure 1.1-1 of Section 1.1 of

this IS/EA for the limits of the study area) and properties up to approximately 1,320 ft (0.25 mi) from the study area were conducted on October 2009.

- **Agency Records Review:** The RWQCB and the Department of Toxic Substances Control (DTSC) were contacted with regard to obtaining and reviewing documents for properties located within and adjacent to the study area. Data contained on their websites were reviewed for any relevant information.
- **Historic Research:** Aerial photographs, topographic maps, oil well maps, and parcel maps were reviewed.
- **Site Reconnaissance:** On November 18, 2009, a site visit of the study area was conducted to assess its current land uses and to visually search for indications of surface and subsurface contamination.

Each of the listings in the environmental database was assessed as to whether it would likely pose a hazardous waste impact to the study area. Numerous listings on databases were found not to pose a hazardous waste impact based on the following criteria, or a combination thereof:

- The listed property was located at a distance where, in Kleinfelder's opinion, the facility would be an unlikely hazardous waste impact to the study area.
- The listed property was located in a downgradient or crossgradient direction from the study area at a distance that would be unlikely to pose a hazardous waste impact to the study area.
- The listed property was identified in low-hazardous risk databases (i.e., UST, HAZNET, SQG databases) not on or immediately adjoining the study area and were not listed in other databases and/or was not listed as having any associated violations. The listing of a facility on these databases is not indicative of an unauthorized release.
- The listing of the facility suggested a short-term release had occurred (i.e., from incidental traffic accidents, or chemicals from illegal drug labs found at residences) with an associated hazardous materials cleanup.
- The quantity of the substances released was not considered to cause a significant hazardous waste impact to the study area.
- The listing indicates that the reported release affected soil only that was not on or immediately adjoining the study area.

Based on these criteria, certain listings were not evaluated further. The remaining listings were reviewed by Kleinfelder to assess whether properties within close

proximity to the study area may have had significant environmental releases or incidents that may have resulted in a hazardous waste impact to the study area.

2.12.3 Environmental Consequences

2.12.3.1 Temporary Impacts

Build Alternative 4 with Design Option A (Preferred Alternative)

Build Alternative 4 with Design Option A would involve disturbance of existing soils and structures; therefore, hazardous soil contaminants (aerially deposited lead [ADL], lead-based paint [LBP], and gasoline) and structural materials (polychlorinated biphenyls [PCBs], mercury, LBP, and asbestos containing materials [ACM]) may be encountered during project construction. In addition, there is a potential that gasoline-impacted soil could be encountered during excavation activities near or at the Texaco Shell property at 530 Avenida Pico.

A survey and sampling for asbestos, LBP, and PCB-, mercury-, and chlorofluorocarbon (CFC)-containing equipment should be conducted during PS&E on building structures that are located within parcels that will be fully acquired as part of the proposed project. According to the City of San Clemente, Community View geographic information system (accessed at http://san-clemente.org/), the structures located on these potential full-take parcels at 524 Avenida Pico (Burger Stop) and 530 Avenida Pico (Shell) were constructed prior to 1970. Based on the latest geometric drawings dated February 16, 2010, structures located within parcels that will be partially acquired as part of the proposed project do not appear to be affected by the project and therefore, surveys and sampling is not recommended for the structures associated with these parcels.

The following is a list of hazardous materials that were identified to be present in the study area. Standard provisions and requirements that would apply during project construction for treatment and handling of these materials are noted, where applicable. The implementation of these standard provisions and requirements would minimize any potential direct or indirect adverse temporary impacts. The following hazardous materials are potentially of concern for the study area:

- **PCBs:** Multiple pad- and pole-mounted transformers were observed on adjoining commercial properties and along streets in the vicinity of the study area. Pad-mounted transformers were observed on the proposed full-acquisition parcels at 530 Avenida Pico (Shell). Additional pole- and pad-mounted transformers were observed near the properties along Avenida Navarro, adjoining the Avenida Pico

I-5 southbound (SB) off-ramp, and on the proposed partial-acquisition Chevron property (515 Avenida Pico). The transformers observed on parcels proposed as partial acquisitions do not appear to be within the affected areas of these parcels and do not appear to represent a hazardous waste impact to the study area. Other transformers may be present near the I-5/Avenida Pico interchange that were not visible from public rights-of-way at the time of the reconnaissance of the study area. Therefore, some transformers may be considered within the proposed study area. No evidence of staining or leaking was observed beneath the observed transformers.

- **ADL:** Lead is generally encountered in unpaved areas (or formerly unpaved areas) adjoining older roads primarily as a result of deposition from historical vehicle emissions. I-5 has been in use since approximately 1968, resulting in the potential exposure of the adjacent unpaved surficial soils to ADL.
- **LBP:** It is possible for elevated lead chromate concentrations to be present within the striping paint and thermoplastic along I-5 and associated roads. In addition, it is possible for LBP to be present in buildings constructed before 1979 within the study area.
- **ACM:** It is possible for asbestos to be present in the study area in the form of buried asbestos-containing cementitious pipe (transite), which was commonly used for water transport as part of historical agricultural practices in the area. ACMs may also be present in existing bridges at the Camino Capistrano undercrossing, Avenida Vaquero undercrossing, Avenida Pico undercrossing, and the I-5/SR-1 interchange structures. Asbestos also has the potential to be present in buildings built before 1979 within the study area. The structures located at 524 Avenida Pico (Burger Stop) and 530 Avenida Pico (Shell) were constructed prior to 1970. These structures are located on parcels that may be fully acquired as part of the proposed project and based on the construction date, may contain asbestos and lead-containing materials.
- **Chemical/Petroleum Hydrocarbon Materials:** Gasoline-impacted soil and/or groundwater are located within the properties listed below. The status of remediation at each site is described below.

    - **530 Avenida Pico (Shell Station).** Full acquisition under Build Alternative 4 with Design Option A. Soil and groundwater on this site are impacted by petroleum hydrocarbons resulting from the former dispenser islands. In 1997, a groundwater plume impacted with benzene was centered on the dispenser islands and extended downgradient beneath Avenida Pico. As of 2002, Orange

County Health Care Agency (OCHCA) reported that the remaining soil and groundwater contamination was stable and not expanding. This was confirmed during a March 2007 subsurface assessment. This facility may be acquired as part of the interchange improvements, and because of known soil contamination in shallow soil on the property, this facility is a potential environmental concern. According to OCHCA, there is a low likelihood that this closed case will be reopened. This site is considered a medium risk.

2.12.3.2 Permanent Impacts

Build Alternative 4 with Design Option A (Preferred Alternative)

Routine maintenance activities during operation of the proposed project would be required to follow applicable regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, the operation of the proposed project will not result in adverse direct or indirect permanent impacts related to hazardous waste or materials.

2.12.4 Avoidance, Minimization, and/or Mitigation Measures

HAZ-1 During Plans, Specifications and Estimates (PS&E), sampling for ADL shall be conducted within unpaved locations adjacent to the existing roadway right-of-way within the study area if such locations have not been tested.

HAZ-2 During PS&E, testing and removal of yellow traffic stripes and pavement marking material will be performed in accordance with Standard Special Provision (SSP) 14-100.

HAZ-3 During the Project Approval and Environmental Document (PA&ED) and Plans, Specifications, and Estimates (PS&E) phases, an asbestos survey and sampling shall be conducted for existing bridges proposed to be demolished or modified at Camino Capistrano undercrossing (UC), "Route 5/1 Separation", "5/N5-N1 Conn Separation", Avenida Vaquero UC, and Avenida Pico UC. The survey shall be conducted in conformance with the United States Environmental Protection Agency National Emissions Standards for Hazardous Air Pollutants (EPA NESHAPS) 40 Code of Federal Regulations (CFR) regulation and South Coast Air Quality Management District (SCAQMD) Rule 1403. Additionally, notification of the SCAQMD prior to any structure

renovation or demolition is mandatory according to Rule 1403 (d)(1)(B).

HAZ-4 A survey and sampling for asbestos, LBP, and PCB-, mercury-, and chlorofluorocarbon (CFC)-containing equipment should be conducted during PS&E on building structures that are located within parcels that will be fully acquired as part of the proposed project. According to the City of San Clemente, Community View geographic information system (accessed at http://san-clemente.org/), the structures located on these potential full-take parcels at 524 Avenida Pico (Burger Stop) and 530 Avenida Pico (Shell) were constructed prior to 1970. Based on the latest geometric drawings dated February 16, 2010, structures located within parcels that will be partially acquired as part of the proposed project do not appear to be affected by the project and therefore, surveys and sampling is not recommended for the structures associated with these parcels. The surveys should be conducted in conformance with the EPA NESHAP 40 CFR regulation, and SCAQMD Rule 1403. Additionally, notification of the SCAQMD prior to any structure renovation or demolition is mandatory according to Rule 1403 (d)(1)(B).

HAZ-5 During PS&E, transformers that will be removed or relocated as part of the proposed project shall be sampled for PCBs.

HAZ-6 If signs of potential impact (odors, discolored soil, etc.) are observed during construction activity, construction shall cease and the California Department of Transportation's Unknown Procedures for Construction should be followed. Should groundwater be encountered during construction activities, or if construction dewatering is necessary, then sampling and analysis of groundwater shall be conducted to identify the appropriate management and disposal of the groundwater.

HAZ-7 Properties proposed to be partially, or fully, acquired as part of the proposed project will need a Phase II investigation. Soil sampling will be conducted during PS&E at 530 Avenida Pico (Shell Gas Station) to determine any residual soil contamination on these properties. If contaminated soil is determined to be present at these properties, then additional remedial action options may be necessary to properly address the clean-up, handling, and disposal of such material. In addition, since this property is proposed to be fully acquired and required groundwater contamination was detected beneath the site in 2007, groundwater should be sampled. This additional monitoring should be done during the PS&E phase.

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